

ACC NR: AT6033998

SOURCE CODE: UR/3227/64/003/000/0138/0142

AUTHOR: Mel'nikov, Yu. S.; Sobakin, Ye. L.

ORG: none

TITLE: Semiconductor-type rpm-meter for wound-rotor induction motors

SOURCE: Tomsk. Institut radioelektroniki i elektronnoy tekhniki. Trudy, v. 3, 1964, 138-142

TOPIC TAGS: induction motor, automatic control system, rpm meter

ABSTRACT: To eliminate space-requiring tachometer constructions, and drawbacks associated with parametric tachometric devices, the measurement of rotor-current frequency, which is linearly connected with the motor rpm, is suggested. To this end, a resistor is introduced into the rotor circuit, and the voltage drop across this resistor is used as a source signal applied to a transistorized amplifier. A principal circuit diagram of this amplifier is shown, and its operation is explained. Claimed advantages: no contacts, no mechanical attachments to the motor, no rotating parts. Disadvantage: high amplifier gain needed as the source signal is small. Orig. art. has: 3 figures and 6 formulas.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 001

Cord 1/1

RIKKONEN, V.M., kand. tekhn. nauk; MEL'NIKOV, Yu.S., inzh.

Electrical heating of a moving wire. Elektrotehnika 36 no.5:
53-55 My '65. (MIRA 18:5,

5/15/62/000/116/007/C1
 10/6/115

10/6/115
 A THIN: 10/6/115
 TITLE: 10/6/115
 FEATURES: 10/6/115

TEXT: 10/6/115
 The conditions were selected for the alloy and the weld in
 thin-sheet material, assuring the production of high-quality weld joints.
 The use of filler metal is recommended to obtain good fusion of the edges. Poor
 rear formation on the reverse side of the weld is prevented by using a steel
 backing plate with a 1/8" deep and 1/4" wide groove. The thermal welding para-
 meters are determined from the fusion heat, heat-resistance and heat conductivity
 of the alloy. Welds produced under the selected conditions (Table 1) showed
 a strength that was not below 80% the strength of the base metal. The possibili-
 ty of deforming the welds was investigated by means of manual drifting and
 rolling on steel rolls. Positive results were obtained in drifting and rolling
 of the weld joints with preheating to 400 - 500°C. Deformation of the welds
 with preheating did not impair their quality and can be recommended for the
 manufacture of parts.

Card 1/2

Automatic argon-arc welding "Al" magnesium alloy

5/13/52/000/16/1 7013
AC05/Al 6

Table 1:

Thickness of material in mm	Welding current amps	Diameter of tungsten electrode	Diameter of filler wire	Welding speed in m/min
1.2 + 1.2	12	1.2	2	7
1.0 + 1.0	10	1.0	2	7
1.2 + 1.0	10	1.2	2	7
1.5 + 1.2	12	1.5	2	7

Filler wire feed rate: 10 m/min; argon consumption - 7 liters/min.

S/0135/64/000/006/0016/0019

ACCESSION NR: AP4040698

AUTHOR: Chakalev, A. A. (Engineer); Zaytsev, V. I. (Engineer);
Skakun, G. F. (Candidate of technical sciences); Mel'nikov, Yu. V.
(Engineer)

TITLE: Vacuum-tight seam welding of MA8 alloy

SOURCE: Svarochnoye proizvodstvo, no. 6 (630), 1964, 16-19

TOPIC TAGS: magnesium manganese cerium system, magnesium manganese
alloy, cerium containing alloy, MA8 alloy, alloy welding, seam welding,
alloy weld, vacuum tight weld, airtight weld

ABSTRACT: The conditions for obtaining air-tight seam-welded joints
in sheets of MA8 magnesium alloy (1.5—2.5% Mn; 0.3% each Al and Zn;
0.15—0.35% Ce; 0.05% each Cu and Fe; 0.02% Be; 0.15% Si; 0.01% Ni)
have been determined. Flat specimens, assembled from sheets of the
same or different thickness which varied from 1 to 4 mm, and shells
400, 800, and 1500 mm in diameter, made from 1.5-mm sheets and rein-
forced with outside ribs 1.8-mm thick, were seam welded. To compensate

Card 1/3

ACCESSION NR: AP4040698

for poor reproducibility of physical and technological properties of weldments and the unstable characteristics of welders, double seams overlapping one another on 40—50% of their width were used. Both mechanical and chemical methods of surface cleaning were found equally satisfactory. Fusion of the thinner sheet up to 60% of its thickness can be tolerated since it causes no metal overheating, crack formation, decrease of corrosion resistance of the weld, or leaky joints. In welding circumferential seams the nugget thickness, particularly in the inner sheet, decreased with decreasing shell diameter. Hence, the geometry of the joined surfaces should be taken into account in the selection of welding conditions in order to avoid inadequate fusion or overheating. Seam welding of sheets of dissimilar thickness with a thickness ratio of 1:3 or higher produced satisfactory joints only with the use of an MA8 alloy insert, 0.1- or 0.3-mm thick, between the electrode and the thin sheet. Special electrodes with intensive inner water cooling have been designed for seam welding of MA8 and other magnesium alloys. With these electrodes welding speeds as high as 60—70 spots per minute can be attained. The tightness of joints was tested with a helium leak detector. Orig. art. has: 7 figures and 2 tables.

2/3

ACCESSION NR: AT4012721

S/2981/63/000/002/0111/0118

AUTHOR: Mel'nikov, Yu. V.; Zyukin, V. V.; Oboturov, V. I.

TITLE: Welding of SAP-1

SOURCE: Alyuminiyevyye splavy*. Sbornik statey, no. 2. Spechenny*ye splavy*. Moscow, 1963, 111-118

TOPIC TAGS: powder metallurgy; aluminum, sintered powder, aluminum powder, sintered aluminum powder, welding, resistance welding, flash welding, spot welding, roller welding

ABSTRACT: Welding of SAP-1 by the flash and resistance methods was performed with 1.5 mm sheets made of preliminarily treated brickets. Comparison of the strength and structure of the weld joints showed that manual argon arc welding of SAP-1 using AF-4A flux is possible with high temperature annealing of the brickets. The strength of the weld joints equals 95% of the strength of the base material at room temperature and 70% at a temperature of 500C. Both roller and spot welding of SAP-1 may also be used. The strength of the weld joints is the same as of high-strength aluminum alloys of the type D19A-T, D20A-T and D16A-T. "The work was carried out under the guidance of K. P. Koryagin; O. B. Martishin, M. V. Korotkova and F. T. Leonov also took part in the work." Orig. art. has: 9

Card 1/2

ACCESSION NR: AT4012721

tables and 10 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 13Feb64

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Card 2/2

L 46113-66 EWT(m)/EWP(v)/I/EWP(t)/ETI/EWP(1) IJP(c) JD/MM
 ACC NR: AP6031411 SOURCE CODE: UR/0135/66/000/009/0020/0023

AUTHOR: Chirkov, Ye. F. (Engineer); Sokolov, V. L. (Engineer); Mel'nikov, Yu. V. (Engineer)

ORG: none

TITLE: Automatic argon-shielded welding of M40 alloy

SOURCE: Svarochnoye proizvodstvo, no. 9, 1966, 20-23

TOPIC TAGS: aluminum alloy, alloy welding, MIG welding, automatic ~~arc~~ welding, ~~weld~~ mechanical property/M40 alloy

ABSTRACT: Experiments have been made to determine the optimum conditions for automatic MIG welding M40 aluminum alloy. Clad alloy sheets, 3-mm thick, heat-treated, strain-hardened and aged (TN1), or heat-treated and strain-hardened (TN), were automatically MIG welded with M40 or HMg6 alloy filler. All welds were found to be helium tight. The highest weld efficiency (87.7%) and a tensile strength of 38.5—42.2 kg/mm² at a bend angle of 38—40 deg were obtained in welds with base and root reinforcements made with M40 filler wire, a specific heat input of 0.408 cal/sec·cm, and a steel backup plate with a 6.0 x (1.2—1.3) mm groove. The same welds without reinforcement had a tensile strength of 34—35 kg/mm², a bend angle of 44—48 deg, and a weld efficiency of 76.5%. A 7—12% increase in the heat input lowers the weld strength by 12%. The use of a copper backup plate, the absence

UDC: 621.791.753.93:669.35

Card 1/2

L 46113-66

ACC NR: AP6031411

of a gap between faying edges, or a small groove in the backup bar require a higher heat input, which lowers the weld strength. Aging after welding M40 alloy in the TN condition did not improve the mechanical properties; hence, full heat treatment of parts from M40 alloy should precede welding. Welding with AMg6 filler wire brought about no appreciable difference in the strength of M40 alloy welds, but it increased the bend angle to 50—57 deg and also increased by almost five times the susceptibility of M40 alloy welds to hot cracking. The difference in strength between the weld and base metal decreases with increasing temperature, and at 250C equals zero. [MS]
Orig. art. has: 3 figures and 2 tables.

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 001/ ATD PRESS:
5087

Card

2/2 LC

METALLURGICAL LITERATURE CLASSIFICATION									
SUBJECT					CLASSIFICATION				
SUBJECT					CLASSIFICATION				
Biochemical formation of oxalic acid from sugar. A. A. Melnikova and V. S. Butkevich. <i>Microbiology</i> (U. S. S. R.) 6: 318-20 (in English, 820-7) (1930); cf. C. A. 34, 60089. - A strain of <i>Aspergillus niger</i> with a good capacity for citric acid formation was used. The surface molds were raised at 30° on a medium contg. sugar 5, NH₄NO₃ 0.3, KH₂PO₄ 0.000, MgSO₄·7H₂O 0.003, ZnSO₄·7H₂O 0.004 and FeCl₃ 0.003%. The addn. of MgSO₄ highly activates the accumulation of oxalic acid. The yield corresponds to 3 mols. of acid per 1 mol. of sugar. This ratio indicates that there is no preliminary splitting as in alcoholic fermentation. The yield increases progressively and reaches a max. toward the end of the sugar supply. T. Laanes									

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200
 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300
 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400
 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500
 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600
 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700
 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800
 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900
 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000
 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 103

MELENKOVA, A. A.

PROCESSES AND PROPERTIES INDEX

16

Dibasic acids containing four C atoms as intermediate products in the biological oxidation of hexoses to oxalic acid. V. S. Butkevich and A. A. Melnikova. *Doklady Akad. Nauk S. S. R.* 39, 188 N(1943); *Compt rend acad. sci. U. R. S. S.* 39, 149-50(1943). Previous work (cf. U. R. S. S. 35, 3025) showed that during oxidation of glucose (I) by *Aspergillus niger* (AN), the yields of oxalic acid (II) approached the max. (3 mols. II per mol. of I consumed) only during oxidation of the latter portions of the I, i. e., after most of the I had been acted on by AN. The intermediate oxidation products were identified as follows. A 1% I soln., contg. 1.2-2.0% NaHCO_3 , was acted on by AN at 30° until 60-65% of the I had reacted with formation of 1-1.5 mols. of II per mol. of I reacted. The resulting soln. was treated with CaSO_4 to ppt II, filtered, acidified with H_2SO_4 and extd. with ether. The residue obtained on evapn. of the ether ext. was fractionally crystd. from water. The 4 fractions obtained, in order of increasing soly., consisted mostly of: 1st fumaric acid (III), 2nd III mixed with tartaric acid (IV), 3rd IV, 4th malic acid (V). The amts. of I, III, IV and V recovered were such as to suggest the presence of other undetected intermediate oxidation products, one of which was probably gluconic acid. J. W. Perry

ASB, SLA METALLURGICAL LITERATURE CLASSIFICATION

Mel'nikova, A. A.

2
Nitrogen metabolism of *Penicillium chrysogenum*. I. Metabolism of nitrogen compounds in *Penicillium chrysogenum* cultures during fermentation. A. A. Mel'nikova and E. I. Surikova (All-Union Sci. Research Inst. Antibiotics, Moscow). *Mikrobiologiya* 25, 201-7(1950).--Some of the N compds. elaborated by *P. chrysogenum* in culture mediums are amino acids, but not enough to account for all the org. N. Glycine, valine, alanine, and glutamic and aspartic acids were identified; they are also formed by *P. janczewskii*, but later in the fermentation (at the autolysis stage). This relatively early appearance of org. N in the metabolism indicates high mycelial metabolic activity, related to the biosynthesis of penicillin. Julian E. Smith.

ANTIBIOTICS

"A Study of the Physiological Properties of Various Strains of penicillin-producing *Penicillium chrysogenum*", by A.A. Mel'nikova and Ye.I. Surikova, All-Union Scientific-Research Institute of Antibiotics, Antibiotiki, No 3, May-June 1957, pp 7-8.

The authors say that differences in the ability of producing penicillin by various strains of *Penicillium chrysogenum* leads one to suppose that there are also other physiological differences among them.

In this article, the authors attempt to explain the physiological characteristics of different strains of *Penicillium chrysogenum* by way of the study of the peculiarities of metabolism that appear in the process of fermentation during the biosynthesis of penicillin.

Three different strains of *Penicillium chrysogenum* were used in the process of experimentation:

Card 1/3

- 20 -

ANTIBIOTICS

VNIIA-35, VNIIA-A, and a "new variety".

The culture medium was of the following composition:

$(\text{NH}_4)_2\text{SO}_4$ - 0.5%; KH_2PO_4 - 0.3%; $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ - 0.025%; $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ - 0.01%; $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$ - 0.002%; $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ - 0.0005%; $\text{MnSO}_4 \cdot \text{H}_2\text{O}$ - 0.002%; glucose - 0.75%; lactose - 1.75%; acetic acid - 0.24%; lactic acid - 0.5%; pH after sterilization of media - 6.1-6.3. Sugars were sterilized separately and added to the media before seeding.

After describing in detail the technique followed, and the findings, the authors present the following conclusions:

1. Various strains of *Penicillium chrysogenum* differ from one another both in the ability for biosynthesis of penicillin as well as in other physiological properties.

Card 2/3

- 21 -

MEL'NIKOVA, A.A.; SURIKOVA, Ye.I.

Nitrogen metabolism in *Penicillium chrysogenum*. Part 2: Study of nitrogen fractions in the mycelia and culture medium of *Penicillium chrysogenum* [with summary in English]. *Mikrobiologiya* 26 no.1:35-44 Ja-F '57. (MIRA 10:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov, Moskva.

(NITROGEN, metabolism,

Penicillium chrysogenum, determ. in mycelia & culture media (Rus))

(PENICILLIUM, metabolism,

chrysogenum, nitrogen fractions in mycelia & culture media (Rus))

MEL'NIKOVA, A.A.

SURIKOVA, Ye.I.; MEL'NIKOVA, A.A.

Carbohydrate metabolism in *Penicillium chrysogenum* [with summary in English]. *Mikrobiologiya*, 26 no.3:285-291 My-Je '57. (MIRA 10:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov, Moskva.

(PENICILLIUM, metabolism,
chrysogenum, carbohydrates (Rus))

(CARBOHYDRATES, metabolism,
Penicillium chrysogenum (Rus))

MEL'NIKOVA, A.A.; VASIL'YEV, G.M.; CHUMAK, M.D.; VESHLOV, N.M.; SNEZHKOVA, L.P.

Culture media for detecting antibiotic substances in actinomycetes.
Mikrobiologiya 26 no.6:762-766 N-D '57. (MIRA 11:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov,
Moskva.

(ACTINOMYCES, culture,
media for detection of antibiotics (Rus)
(ANTIBIOTICS, determination,
in Actinomyces culture, culture media (Rus)

MEL'NIKOVA, A.A., SEMENOVA, V.A., SOLOV'YEVA, N.K., SNEZHNOVA, L.P.
GINZBURG, G.N.

Formation of actinoxanthin; a new antitumor antibiotic [with
summary in English]. Antibiotiki 3 no.1:18-22 Ja-F'58 (MIRA 11:5)

1. Otdel novykh antibiotikov Vsesoyuznogo nauchno-issledovatel'
skogo instituta.

(ACTINOMYCES,

globisporus, prod. of anti-tumor antibiotic
actinoxanthine (Rus))

(ANTIBIOTICS,

actinoxanthine, anti-tumor activity & prod. by
Actinomyces globisporus (Rus))

(CYTOTOXIC DRUGS,

same)

MEL'NIKOVA, A.A.; SURIKOVA, Ye.I.

Oxalic acid formation in *Penicillium chrysogenum* during penicillin biosynthesis. *Izv. AN SSSR. Ser. biol.* no.5:579-583 8-0 '58.
(MIRA 11:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(OXALIC ACID) (PENICILLIUM)

MEL'NIKOVA, A.A.; VESELOV, N.M.

Comparative physiological investigation of two strains of
Actinomyces violaceus which produce antiviral antibiotics.
Antibiotiki 4 no.1:31-36 Ja-F '59. (MIRA 12:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(ANTIBIOTICS,
violarin, prod. by Actinomyces violaceus (Rus))
(ACTINOMYCES,
violaceus, prod. of antibiotic violarin (Rus))

MEL'NIKOVA, A.A.; SURIKOVA, Ye.I.

Conditions for the cultivation of *Penicillium chrysogenum* on
synthetic media [with summary in English]. Mikrobiologiya 28
no.1:52-57 Ja-F '59. (MIRA 12:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(PENICILLIUM, culture,
chrysogenum, on synthetic media (Rus))

MEL'NIKOVA, A.A.; VESELOV, N.M.

Paper chromatography of antibiotics produced by *Actinomyces violaceus* strains 452-7 and 1212. Antibiotiki 5 no.2:9-13 Mr-Ap '60.

(MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(ANTIBIOTICS) (ACTINOMYCETES)

SEMENOVA, V.A.; IL'INSKAYA, S.A.; TAYG, M.M.; MEL'NIKOVA, A.A.;
SHNEYERSON, A.N.; BUYANOVSKAYA, I.S.; VESELOV, N.M.

Study of some actinomycetes forming closely related anti-
biotics. Antibiotiki 8 no.1:12-18 Ja'63. (MIRA 16:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut anti-
biotikov.
(ACTINOMYCES) (BACTERIOLOGY—CULTURES AND CULTURE MEDIA)
(ANTIBIOTICS)

GERMANOVA, K.I.; GONCHARSKAYA, T.Ya.; DELOVA, I.D.; IL'INSKAYA, S.A.;
MEL'NIKOVA, A.A.; ORESHNIKOVA, T.P.; RESHETOV, P.D.; RUDAYA, S.D.;
SINITSYNA, Z.T.; SOLOV'YEVA, N.K.; KHOKHLOV, A.S.

Components and antiviral properties of some streptothricin anti-
biotics. Antibiotiki 10 no.2:117-122 F '65.

(MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov
i Institut khimii prirodnkh soedineniy AN SSSR, Moskva.

GELMAN, N.E.; BRESLER, P.I.; RUZIN, B.N.; GREK, N.V.; SHEVELEVA, N.S.;
MELNIKOVA, A.A.

New method for the automatic microdetermination of carbon and
hydrogen in organic compounds. Dokl. AN SSSR 161 no.1:107-110
Mr '65. (MIRA 18:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i Spetsial'-
noye konstruktorskoye byuro analiticheskogo priborostroyeniya AN
SSSR. Submitted July 29, 1964.

MELENKOVA A.A.

5

✓ Determination of the coefficients of crystallization of
radium in the case of its distribution between the melt and
crystals of barium chloride and of lead chloride. V. P.
Krickman, A. A. Melnikova, and H. I. Ureunina. Bull.
Acad. Sci. U.S.S.R., Div. Chem. Sci. 1954, 827-30 (Engl.
translation).—See C.A. 49, 14439k. B.M.R.

Smirnov

MEL'NIKOVA, A.A.

USSR/ Chemistry - Inorganic chemistry

Card 1/1 Pub. 40 - 1/27

Authors : Klokman, V. R.; Mel'nikova, A. A.; and Yryupina, N. I.

Title : The crystallization coefficients of Ra during its distribution between fusion and BaCl_2 and PbCl_2 crystals

Periodical : Izv. AN SSSR. Otd. khim. nauk 6, 953-957, Nov-Dec 1954

Abstract : The crystallization coefficients of Ra during its distribution between the fusion and BaCl_2 and PbCl_2 crystals was experimentally determined. A greater proximity between the Ra and Ba properties was observed only at high temperatures. The enrichment of the solid phase by the Ra was not observed in the systems investigated. It was found that RaCl_2 crystallizes in the fusion in the form of an anhydrous chloride and demonstrates the very same characteristics as BaCl_2 . Nine references : 6 USSR and 3 German (1879-1953). Tables.

Institution : Acad. of Sc. USSR, The V. G. Khlopin Radium Institute

Submitted : February 12, 1954

KLOKMAN, V. R., MEL'NIKOVA, A. A. and POLYAKOV, V.A. (radiat. Inst. im V. G. Khlopin)

"Investigation of the Various Factors Influencing the Crystallization Coefficient of Radium in Its Distribution Between Fused and Crystalline Lead Chloride

KLOKMAN, V.R.; MEL'NIKOVA, A.A.

Formation of abnormal mixed ReF_2 - LaF_3 crystals in the crystallization
of lanthanum fluoride melt. Radiokhimiia 1 no.3:241-246 '59.
(MIRA 12:10)
(Lanthanum fluoride) (Crystals--Growth)

KLOKMAN, V.R.; LOVTSYUS, G.P.; MEL'NIKOVA, A.A.

Distribution of the radioactive isotope of lead, ThB, between
the melt and crystals of alkali metal halides. Radiokhimiia 1
no.3:247-252 '59. (MIRA 12:10)
(Lead--Isotopes) (Alkali metal halide crystals)

XLOKMAN, V.R.; MEL'NIKOVA, A.A.

Effect of the chemical nature of the second component of a binary system on the coprecipitation of radium with barium chloride.

Radiokhimiia 1 no.5:514-520 '59. (MIRA 13:2)

(Radium) (Barium chloride)

KLOKMAN, V.R.; MEL'NIKOVA, A.A.; MYAKISHEV, K.G.; SMIRNOV, V.S.

Effect of complex formation in the melt on the crystallization coefficient of rubidium chloride in the systems $KCl - LiCl$, $KCl - BaCl_2$, $KCl - CaCl_2$. Radiokhimiia 2 no.4:386-392 '60.

(MIRA13:9)

(Rubidium chloride)

(Crystallization) (Chlorides)

S/186/60/002/006/025/026
A051/A129

AUTHORS: Klokman, V. R.; Melnikova, A. A.

TITLE: The effect of the difference in radii of the cations of micro- and macrocomponents on the crystallization coefficient D value. KCl-NaCl-BaCl₂ system.

PERIODICAL: Radiokhimiya, v. 2, no. 6, 1960, 753 - 754

TEXT: It should be pointed out that in previous works (Ref. 1: V. R. Klokman and G. I. Avdeyev, Radiokhimiya, 2, 4, 39, 1960, Ref. 2: V. R. Klokman, B. A. Payusov, Radiokhimiya, 2, 5, 52, 1960, Ref. 3: V. R. Klokman, Yu. M. Garmashev, Radiokhimiya, 2, 1, 26, 1959) it was shown that the less the difference in the radii of micro- and macrocomponent cations, the greater the value of the crystallization coefficient D. In this work a different system was studied namely, the crystallization coefficient for NaCl, labeled with Na²⁴, was determined with its distribution between the melt and the crystals of KCl in the binary system KCl-BaCl₂. The data submitted show that the crystallization coefficient of NaCl is less than that of RbCl (Ref. 4: V. R. Klokman, A. A. Melnikova, K. G. Myakishev

Card 1/2

The effect of the difference in radii of

3/186/60/002/006/025/026

AOE1/A129

and V.S. Smirnov, Radiokhimiya, 2, 286, 1960; at the same temperatures. Thus, it is concluded that the relation noted previously between the crystallization coefficient and the radii difference of the micro- and macro-component cations was proved to be valid for other systems also. It is pointed out that in this case, similar to that of (Ref. 4) the crystallization coefficient of the micro-component was found not to depend on the composition, nor on the melt temperature, in spite of the presence of a congruently melting compound in this system. There is 1 vari- and 4 Soviet-bution referen-.

SUBMITTED

11/11/1960.

Card 2/2

МЕЛНИКОВА
KATSMEL'SON, F.Ya.; MEL'NIKOVA, A.F.

Results of treating epilepsy in children with trimethine; catamnestic data. Zhur.nevr. i psikh. Supplement:82-83 '57. (MIRA 11:1)

1. Dispansernoye otdeleniye dlya detey i podrostkov pri psikhonevrologicheskoy bol'nitse imeni Solov'yeva (glavnyy vrach V.D. Denisov).

(EPILEPSY) (OXAZOLIDINEDIONE)

MEL'NIKOVA, A.F.

"Enuresis; a clinical and genetic study" [in English] by B. Hallgren.
Reviewed by A.F. Mel'nikova, Zhur.nevr. i psikh. 58 no.7:892-893 '58
(MIRA 11:7)

(URINE--INCONTINENCE)

VERENINOVA, N.K.; SMIRNOVA, Ye.I.; KALACHEVA, N.F.; KUZNETSOVA, N.I.;
MEL'NIKOVA, A.F.; DOBROTSEVETOVA, T.Ya.

Effectiveness of complex vaccination with live vaccines against plague,
tularemia, brucellosis, and anthrax. Report No.2: Intensity of immunity
in complex vaccination of guinea pigs against intratracheal infection.
Zhur.mikrobiol.,epid.i immun. 30 no.11:19-24 N '59. (MIRA 13:3)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo instituta mikrobio-
logii i epidemiologii yugo-vostoka SSSR.

(PLAGUE, immunol.)

(TULAREMIA, immunol.)

(BRUCELLOSIS immunol.)

(ANTHRAX immunol.)

(VACCINATION)

VAL'DNER, Oleg Anatol'yevich; SHAL'NOV, Aleksandr Vsevolodovich;
MEL'NIKOVA, A.I., red.; VLASOVA, N.A., tekhn. red.

[Electromagnetic fields in septate wave guides of electron
accelerators] Elektromagnitnye polia v diafragmirovannykh
volnovodakh lineinykh elektronnykh uskoritelei. Moskva,
Gosatomizdat, 1963. 65 p. (MIRA 17:1)

TARASENKO, Natal'ya Yuvenal'yevna; MEL'NIKOVA, A.I., red.; POPOVA,
S.M., tekhn. red.

[Industrial hygiene in handling thorium] Gigiena truda pri
rabote s toriem. Moskva, Gosatomizdat, 1963. 86 p.
(MIRA 17:1)

(Thorium--Safety measures)

LEVIN, Vasilii Yevseyevich; MEL'NIKOVA, A.I., red.; MAZEL',
Ye.I., tekhn. red.

[Nuclear reactors] IAdernye raktory. Moskva, Gosatom-
izdat. 1963. 303 p. (MIRA 16:11)
(Nuclear reactors)

IRODOV, Igor' Yevgen'yevich; MEL'NIKOVA, A.I., red.; MAZEL', Ye.I.,
tekhn. red.

[Problems in atomic and nuclear physics] Sbornik zadach po
atomnoi i iadernoi fizike. Izd.3., perer. i dop. Moskva,
Gosatomizdat, 1963. 343 p. (MIRA 16:12)
(Nuclear physics--Problems, exercises, etc.)

KRUPCHATNIKOV, Valentin Mikhaylovich; MEL'NIKOVA, A.I., red.

[Ventilation during work involving radioactive substances]
Ventiliatsiia pri rabotakh s radioaktivnymi veshchestvami.
Moskva, Atomizdat, 1964. 199 p. (MIRA 17:12)

ZHERILOVOY, Aleksandr Ivanovich; LATYSHEV, Georgiy Dmitriyevich;
MEL'NIKOVA, A.I., red.

[Nuclear magnetic resonance in a flowing liquid] IAdernyi
magnitnyi rezonans v protochnoi zhidkosti. Moskva, Atom-
izdat, 1964. 252 p. (MIRA 17:6)

BOBKOVA, T. G., SP. AB. 1961. *Tr. Gos. univ. Ser. Estest. Nauki*, 15: 11-12.

THE UNIVERSITY OF CHICAGO PRESS

[illegible]

(radiation dose given to the patient) and the area of the body irradiated (square meters) and the dose rate (rads per hour).

NIFONTOV, B.I.; PROTOPOPOV, D.D.; SITNIKOV, I.Ye.; KULIKOV, A.V.;
MEL'NIKOVA, A.I., red.

[Underground nuclear explosions; problems affecting industrial nuclear explosions] Podzemnye iadernye vzryvy; problemy promyshlennykh iadernykh vzryvov. Moskva, Atomizdat, 1965. 159 p. (MIRA 18:6)

KOMAROVSKIY, Aleksandr Nikolayevich, doktor tekhn. nauk, prof.;
MEL'NIKOVA, A.I., red.

[Construction of nuclear reactors] Stroitel'stvo iadernykh
ustanovok. Izd.2., dop. i perer. Moskva, Atomizdat, 1965.
382 p. (MIRA 18:12)

SEMENKOVA, A.V.; BELOVA, Z.N.; MEL'NIKOVA, A.I.

Discussion of M.A.Shvechikov's article "Let us improve economic planning." Vest. svyazi 23 no.10:27-29 O '63. (MIRA 14:12)

1. Nachal'nik planovo-finansovogo otdela Ministerstva svyazi AzerSSR (for Semenkov). 2. Nachal'nik planovogo otdela Saratovskogo pochtamta (for Belova). 3. Starshiy ekonomist Dzhankoyskogo uzla svyazi Krymskoy oblasti (for Mel'nikova).

MEL'NIKOVA, A.M.

Fungi in the city of Rostov-on-Don and Rostov Province. Vest.derm. 1
ven. 31 no.2:47-48 Kr-Ap '57. (MIRA 12:12)

1. Iz gorodskogo kozhno-venerologicheskogo dispansera.
(ROSTOV PROVINCE--DERMATOPHYTES)

L 12101-66 EWT(1)

ACC NR: AF6000526

SOURCE CODE: UR/0070/65/010/006/0791/0799

44,55
AUTHOR: Chernov, A. A.; Mel'nikova, A. M.

44,55
ORG: Institute of Crystallography, AN SSSR (Institut kristallografii AN SSSR)

TITLE: Growth of crystals from a solution in the presence of an extraneous spherical particle

SOURCE: Kristallografiya, v. 10, no. 6, 1965, 791-799

TOPIC TAGS: single crystal growing, crystal imperfection

21, 44, 55
ABSTRACT: One of the ways for introducing impurities into growing crystals is to generate channels under foreign particles located within the solution or melt near the surface of the crystal. The present paper investigates theoretically the growth of the face of the crystal from a solution in the presence of a spherical particle. The concentration distribution in the solution and the crystallization conditions are stationary (the concentration satisfies the Laplace equation). After formulating the general problem concerning the crystal growth under these conditions, the authors determine the concentration field caused by the presence of the sphere at a fixed distance from the plane crystallization front. The possible incorporation of the mother liquor under the sphere due to a lack

Card 1/2

UDC: 548.52

L 12101-66

ACC NR: AP6000526

of sufficient feed is estimated, and the results are found in qualitative agreement with experiments comprising small-size spheres. The reasons for the experimentally observed strong dependence of impurity incorporation on supersaturation are also discussed. Orig. art. has: 30 formulas and 5 figures.

SUB CODE: 20 / SUBM DATE: 29May65 / ORIG REF: 007

H.W.
Caro 12

L 12099-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c)

LJP(c) JD/GG

ACC NR: AF6000527

SOURCE CODE: UR/0070/65/010/006/0800/0804

AUTHOR: Chernov, A. A.; Mel'nikova, A. M.

36
B

ORG: Institute of Crystallography, AN SSSR (Institut kristallografi AN SSSR)

TITLE: Growth of crystals from a melt in the presence of an extraneous spherical particle

SOURCE: Kristallografiya, v. 10, no. 6, 1965, 800-804

TOPIC TAGS: single crystal growing, crystal imperfection

ABSTRACT: This paper, which is a continuation of a preceding article (Kristallografiya, 10, 6, 1965), investigates theoretically the growth of crystals from melts in the presence of an extraneous spherical particle located over the crystalline surface. The growth is assumed to occur under stationary conditions, and following the formulation of the problem, the authors determine the temperature field of the growing crystals in the presence of a sphere at a fixed distance from the plane crystallization front. A discussion of the results shows that during the interaction between the particle and the crystal the sphere either accelerates the growth of the crystal or a channel is formed within the crystal under the sphere. Orig. art. has: 23 formulas and 3 figures.

Card 1/2

UDC: 548.52

L 12099-66

ACC NR: AP6000527

SUB CODE: 20 / SUBM DATE: 29May65 / ORIG REF: 002

Card 2/2

LIBRARY INDEX										PROCESS AND PROPERTY INDEX									
BC 61-5 Determination of metallic, ferrous, and ferric iron in slag and cement. P. P. Bodalkov and A. N. Melnikova (<i>J. Appl. Chem. Russ.</i>, 1944, 18, 1722-1724).—Kneer's method is recommended; Zimmermann and Reinhardt's is untrustworthy.																			
ABR-51A METALLURGICAL LITERATURE CLASSIFICATION																			
SOURCE #1										SOURCE #2									
SOURCE #3										SOURCE #4									

MEL'NIKOVA, A. N.

3
/ Silica gel from Khar'kov tripoli clay deposit (Zelenki). S. N.
KUZ'MENKO AND A. N. MEL'NIKOVA. Zhur. Priklad. Khim., 26
[12] 1317-20 (1953). The material contains up to 80% SiO₂ and
has high sorption characteristics. Silica gel was extracted by
boiling with 5 N KOH. The gel met the requirements of Russian
standard OST 3956-47. B.Z.K.

Mel'nikova F.A.

U.S.S.R.

✓Silica gel from the industrial, clayey soils of the Khar'kov region. S. N. Kuz'menko and A. N. Mel'nikova. J. Appl. Chem. U.S.S.R. 20, 1257-04 (1968) (English translation).
-Sci. C.A. 49, 839g. H. L. H.

МЕЛНИКОВА, А. Н.

24-9-12/33

AUTHORS: Losev, B. I., Mel'nikova, A. N. and El'piner, I. Ye. (Moscow)

TITLE: Halogenation and extraction of germanium from coal inside an ultrasonic wave field. (Galoidirovaniye i izvlecheniye germaniya iz ugley v pole ul'trazvukovykh voln).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1957, No.9, pp. 90-95 (USSR)

ABSTRACT: Coal ash does contain a certain amount of germanium. In earlier work (Refs.1-4), the authors investigated the ash of clarain and vitrain and, particularly, of fusain. Since ultrasonics have dispersion and chemical effects, it was obvious to assume that it is possible to intensify by means of ultrasonics halogenation reactions which represent an important stage in the process of extraction of rare elements from the coal substance. In the experiments the coal was crushed to a fraction passing through a sieve with holes of 0.25 mm. The studied coal contained not over 0.0006% of germanium (relative to the ash content); only in a single specimen did the germanium content amount to 0.00175%. Bromination of the coal was effected in a three-neck flask containing an agitator. A certain quantity of water was added to the coal and the

Card 1/5 mixture was carefully intermixed. Following that, brome

24-9-12/33

Halogenation and extraction of germanium from coal inside an ultrasonic wave field.

was introduced in drops and the bromination was continued for a specified time whilst continuously mixing the reaction mixture. Then, the coal was separated from the liquid phase in a Buchner funnel and washed from the adsorbed bromine by distilled water until the washing water showed a negative reaction from the point of view of haloid content. Following that, the coal was dried at 80°C and analysed and the quantity of germanium in the filtrate was determined by means of a method developed by Nazarenko, V. A. and Ravitska, R.V. Chlorination was effected whilst feeding chlorine at a speed of two bubbles per second. For separating the germanium it is extracted from the analysed aqueous solutions in the form of germanium tetrachloride from 9-normal hydrochloric acid with carbon tetrachloride. The extract of germanium tetrachloride in carbon tetrachloride is effected by means of water which is then acidified and gelatine and phenyl fluoride are added. Ultrasonics of 380 and 750 kc/sec were supplied from a piezo-quartz plate of 50 mm dia. with a radiation intensity of 8W/cm² of the radiating surface. The distance between the reaction vessel and the piezo-quartz plate

Card 2/5

24-9-12/33

Halogenation and extraction of germanium from coal inside an ultrasonic wave field.

equalled 15 to 16 cm. Halogenation inside an ultrasonic field was effected for coal of 0.25 to 0.10 mm fractions in an aqueous medium and the extraction of germanium by halogenation of coal was investigated inside an ultrasonic field as well as the extraction of germanium from coal under the effect of an ultrasonic field without halogenation. The results are plotted in graphs. An intensification was observed of the process of halogenation during irradiation with ultrasonics and this is primarily attributed to the fact that the presence in the aqueous solution of haloid is partly activated by the ultrasonics, which leads to the appearance of atomic chlorine or bromine which is chemically more active than the molecular haloid. It is pointed out that activation of certain gases in the ultrasonics field is possible only in the presence of cavitation; speeding up of the halogenation process is in principle possible at such an intensity of the ultrasonics at which cavitation phenomena will inevitably occur; under certain conditions cavitation will set in approximately for a radiation intensity of 0.3 W/cm^2 . In the here described experiments, the irradiation intensity was 8 W/cm^2 .

Card 3/5 however, the irradiation was effected in glass vessels

24-9-12/33

Halogenation and extraction of germanium from coal inside an ultrasonic wave field.

which were submerged into an "ultrasonic" fountain. According to Bergmann, the surface of glass reflects about 80% of the incident ultrasonic energy. Of particular interest is the fact of separation of germanium from the coal inside an ultrasonics field in absence of a haloid in the reaction mixture. The hypothesis is expressed that separation of germanium from coal is appreciably affected by mechanical forces which are linked with the appearance and collapse of cavitation bubbles which generate shock waves capable of breaking up the coal substance, provided that the cavitation cavity forms at a distance not exceeding a few microns from the coal particle. The results throw a new light on the intensified separation of germanium during simultaneous irradiation and halogenation of coal in presence of slight quantities of carbon tetrachloride. The selection of this compound is not accidental since it is known that traces of carbon tetrachloride intensify oxidation processes inside an ultrasonics field, as a result of which atomic Cl splits off easily. Intensification of the chemical processes in presence of CCl_4 is additionally explained by the fact

Card 4/5

Halogenation and extraction of germanium from coal inside an
ultrasonic wave field. 24-9-12/33

that, being broken up into fine particles and scattered throughout the entire volume of the water, it produces nuclei of easy disruption of the continuity of the irradiated liquid under the influence of ultrasonic waves, i.e. it improves the conditions for the formation of cavitation. On the basis of the obtained results, it is concluded that the halogenation of coal proceeds much more rapidly inside an ultrasonic field than under ordinary conditions; the process of brominations proceeds about 160 times faster inside an ultrasonic field than without such a field. Depending on the reaction conditions, bromination of coal inside an ultrasonic field permits extraction of 50 to 100% of the germanium contained in the coal charge. Carbon tetrachloride has a catalytic effect on the processes of separation of germanium from coal by the method of bromination inside an ultrasonic field. The experiments also showed that under certain conditions it is possible to extract germanium from coal without simultaneous halogenation. There are 4 figures and 4 Slavic references.

Card 5/5

SUBMITTED: June 5, 1957.

AVAILABLE: Library of Congress.

9-7-30/1

AUTHORS: Losev, B. I. , El'piner, I. Ye. , Mel'nikova, A. N.

TITLE: On the Halogenation of Coals Under Influence of Ultrasonic Waves
(O protsesse galoidirovaniya ugley pod deystviyem ultrazvukovykh voln)

PERIODICAL: Doklady Akademii Nauk SSSR, 1971, Vol. 112, No. 1, p. 100-101; (USSR)

ABSTRACT: By extraction of rare metals from coals the problems of halogenation of coals have become acute, because this is the main method applied for this purpose. However, exact data as to the mechanism of halogenation are lacking, and the present methods are not characterized by a high yield. The process of halogenation is heterogeneous. It takes place at the boundary of two phases: Solid coal - liquid or gaseous halide. Naturally, for this purpose the solid phase with larger surface and higher dispersion would offer greater advantages. In addition, increase in the chemical activity of the reacting halide should accelerate the speed of the reaction. These requirements are largely satisfied by a new method.

Card 1/4

11-34/11

On the Halogenation of Coals Under Influence of Ultrasonic Waves

devised by the authors of the paper under review, namely the use of ultrasonic waves which increase by several times the original amount the reaction yield and the combination reaction of coal with halides. The bromination takes place under relatively mild conditions of acceleration, i.e. under a relatively low intensity of the ultrasonic waves. These waves also accelerate a reaction with chlorine. A piezoelectric quartz generator was used. The quantity of bromine absorbed by the coal was determined with the aid of a microanalyzer, devised in the Institute of the authors of the present paper (see under "A" below). It can be seen from the results that without being exposed to ultrasonic waves the coal absorbed 2.68 % of its dry weight of bromine during the interval of seven minutes, whereas in the ultrasonic wave field, with the time interval remaining the same, this amount increased to 47.3 %. These data are contained in Table No. 1 of the paper under review. The latter value (47.3 % in the ultrasonic wave field) corresponds to twenty hours of bromination at 0° without exposure to ultrasonic waves; in other words, the process of bromination is accelerated to the times of its original efficiency. A chlorination (Table No. 2 of the

Card 2/4

20-2-30/61

On the Halogenation of Coals Under Influence of Ultrasonic Waves

paper under review) the process of absorption is accelerated almost two- and-a-half times. Rough interpretation of this acceleration: the ultrasonic waves have a dispersing effect, probably as result of mechanic forces that are created at opening and closing of cavitation bubbles. It appears that considerably mechanic forces also are produced when the pulsating frequency of the same gas bubbles coincides with the frequency of the ultrasonic oscillations (resonance phenomenon). Another possibility is the appearance of the activated halide as result of the molecular dissociation in the cavitation cavities, a phenomenon discovered for iodine (with subsequent reduction) as early as 1950. It should also be taken into account that in the cavitation cavities there appear, as result of the splitting of the "activated" water molecules, products with oxidizing effects. There are 2 tables, and 4 references, 3 of which are Soviet

Card 3/4

On the Halogenation of Coals Under Influence of Ultrasonic Waves

20-2-3/60

ASSOCIATION: Institute of Mineral Fuels, AS USSR
(Institut goryuchikh iskopayemykh Akademii nauk SSSR)

PRESENTED: December 4, 1956, by A. N. Frumkin, Member of the Academy

SUBMITTED: October 2, 1957

AVAILABLE: Library of Congress

Card 4/4

SOV/30-58-10-9-000

AUTHORS: Losev, B. I., Mel'nikova, A. N., Saprykin, P. Ia.,
Troyanskaya, M. I., Eviyna, E. I.

TITLE: New Methods of Examining the Material Composition of Coal
(Novyye metody izucheniya veshchestvennogo sostava ugley)

PERIODICAL: Vestnik Akademii nauk SSSR, 1968, Nr 10, pp 58-60 (USSR)

ABSTRACT: Research with the purpose of obtaining the most effective
methods of extracting rare metals from coal was carried out at
the Institut goryachenikh iskopayemykh Akademii nauk SSSR (Institute
for **Mineral Fuels** of the AS USSR). For this purpose,
X-rays, ultrasonics, and electro-hydro effects were used. The
influence of the dose of radiation on the yield of germanium
may be seen in table 1. The second method consists of ultra-
sonic treatment of coal during its halogenation. The results
of experiments with ultrasonic treatment of coal in water are
listed in table 2. A more intensive disruption of the cohesive
forces of rare elements in coal is obtained by the use of elec-
tro-hydraulic effects. These experiments were carried out in the
Laboratoriya elektrogidravlicheskogo effekta Leningradskogo
Politehnicheskogo instituta (Laboratory for Electro-Hydraulic

Card 1/2

SOV/50-8-10-9, 11

New Methods of Examining the Material Composition of Coal

Effects of the Leningrad Polytechnic Institute under the direction of L. A. Yutkin. There are 2 tables.

Card 2/2

LOSEV, B.I.; AMMOV, I.I.; MEL'NIKOVA, A.N.; AMMOV, Ya.M.; CHIBISOVA, K.I.;
CHERNYKH, V.I.

Use of ultrasonic waves in coal bromination. Trudy IGI 8:131-141
'59. (MIRA 13:1)

(Ultrasonic waves--Industrial application)
(Coal--Analysis)

LOSEV, P.I.; MEL'NIKOVA, A.N.; SAPRYKIN, F.Ya.; YUTKIN, L.A.

Crushing coal by the electrohydraulic method. Vest. AN SSSR 29
no.6:62-65 Je '59. (MIRA 12:5)
(Coal, Pulverized) (Electric discharges)

LOSEV, B.I.; MEL'NIKOVA, A.N.; PITIN, R.N.; FARJEROV, I.L.

Volatility of germanium in coals. Trudy IGI 13:164-166 '60.
(MIRA 14:5)

(Germanium)

(Coal)

IONTOV, A.S.; MEL'NIKOVA, A.P.

Development of senile plaques. Vop. psikh. i nevr. no.9:
435-445 '62. (MIRA 17:1)

1. Institut fiziologii AN SSSR i 3-ya psikhiatricheskaya
bol'nitsa Leningrada.

YARIKOV, G.M.; MEL'NIKOVA, A.S.; NIKITINA, G.P.

Carboniferous sediments in western Stalingrad Province. Trudy
VNIIGI no. 19:112-151 '59. (MIRA 13:12)
(Stalingrad Province--Geology, Stratigraphic)

5(2)
 AUTHORS: Cherkesov, A. I., Mel'nikova, A. S. SOV/32-25-2-5/78

TITLE: A Trilonometric Method of Determining Bismuth in Multi-component Alloys (Trilonometricheskiy metod opredeleniya vismuta v mnogokomponentnykh splavakh)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 2, pp 140-141 (USSR)

ABSTRACT: The article describes an accelerated trilonometric method in which hematoxylin (Ref 2) and gallein are used as indicators (Ref 3). A titration is carried out at $\text{pH} \approx 1$ in a nitric solution, and colored compounds of Bi, Sb, and Sn are formed. Up to a 5 % Fe^{3+} content the bismuth titration with trilon is not disturbed, at a content of 15 % Fe^{3+} sodium fluoride has to be added to the solution. The same applies to antimony, while tin is transformed into β -stannic acid at the dissolution of the alloy in nitric acid. The precipitation of stannic acid does not disturb the titration but retards the titration process somewhat before the point of equivalence is reached, which can be seen in the presence of hematoxylin. In comparison with the method described bismuth was determined gravimetrically in the form of BiOBr in artificial metal mixtures and easily meltable alloys (Table 2). When gallein

Card 1/2

A Trilonometric Method of Determining Bismuth in
Multi-component Alloys

SOV/32-25-2-5/79

is used analogous results are obtained. However, the color change at the point of equivalence is less obvious. The analysis process is described. There are 2 tables and 3 references, 2 of which are Soviet.

ASSOCIATION: Astrakhanskiy tekhnicheskiy institut rybnoy promyshlennosti
i khozyaystva (Astrakhan Technical Institute of the Fish
Industry and Economy)

Card 2/2

MEL'NIKOVA, A.S.; CHERKESOV, A.I.

Trilonometric determination of thorium with hematoxylin as
indicator. Zhur.VKHO 6 no.4:469-470 '61. (MIRA 14:7)

1. Astrakhanskiy institut rybnoy promyshlennosti i khozyaystva.
(Thorium—Analysis) (Hematoxylin)

MEL'NIKOVA, A.S.; GOGINA, Ye.A.; NIKITINA, G.P.; MOROZOVA, R.I.

Stratigraphy and lithology of Carboniferous sediments in Volgograd
Province. Trudy VNIING no.1:39-90 '62. (MIRA 16:10)

44 MEL'NIKOVA, A. Ye

BZ-6

Use of chloramine in dyeing and finishing. E. I. Lebedeva and A. E. Melnikova (*Tekst. prom.*, 1950, No. 11, 41).—The colour of grey cotton fabrics made from *h-v* grade cotton containing husk is improved by treatment in a liquor containing 10 g. per l. of chloramine T and 20 g. per l. of NaOH at 90–95° before dyeing. Procedure is described. E. B. UZANOV

1. MEL'NIKOVA, A. YE. - YEZHOVA, A. YE.
2. USSR (600)
4. Cotton Finishing
7. Emulsifying dyed cotton, Tekst.prom. 12 no. 12, 1952

9, Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

MEL'NIKOVA, A. YE.

NOVIKOV, N.V.; GOLUBEV, N.V.; MEL'NIKOVA, A.Ye.

Emulsions for heavy suiting. Tekst.prom. 14 no.10:48 0 '54.
(MLBA 7:10)

1. Zavednyushchiy krasil'no-otdelochnoy fabrikoy Yegor'yevskogo
melanzhevogo kombinata (for Novikov). 2. Zamestitel' zavednyushche-
go fabrikoy (for Golubev). 3. Zavednyushchiy khimlaboratoriyey (for
Mel'nikova).

(Sizing (Textile))

GAIDAMOVICH, S.Ya.; OBUKHOVA, V.R.; MELNIKOVA, E.E.

Tick-borne and Japanese B encephalitis virus complement-fixing antigens from tissue culture. Acta virol. 6 no.3:231-238 My '62.

I. D.I. Ivanovsky Institute of Virology, U.S.S.R. Academy of Medical Sciences, Moscow.

(ENCEPHALITIS JAPANESE B virol) (TISSUE CULTURE)
(COMPLEMENT)

GERSHMAN, R.B.; MEL'NIKOVA, E.N.

Elasticity modulus of carbon steel. [Sbor. trud.] Nauch.-issl.
inst.met. no.4:151-153 '61. (MIRA 15:11)
(Steel--Analysis)
(Elasticity)

OCHERETYANYI, A.; MEL'NIKOVA, F.

Mechanized removal of straw and chaff. Tekh. v sel'khoz. 21 no. 2:18-
23 Ag '61. (MIRA 14:7)
(Straw) (Grain--Harvesting)

89807

S/110/61/000/002/001/009

E035/E517

9.7000

AUTHORS: Mel'nikova, F.M., Engineer, Poznyak, E.L., Candidate of Technical Sciences, Raykhlina, B.B., Engineer and Rozenknop, V.D., Engineer

TITLE: The Calculation of Critical Speeds of Large Turbo-Alternators with the Aid of Digital Computers

PERIODICAL: Vestnik elektropromyshlennosti, 1961, No.2, pp.1-8

TEXT: Two difficulties arise in the determination of critical speeds of large machines; firstly, that the values of the various constants to be used in the computation are not always accurately known; and, secondly, that for shafts with many rotating masses and bearings, the numerical computations become exceedingly lengthy. The authors have solved the second problem by using a computer. For large machines the analysis should take into account the 'elasticity' of the oil films in the bearings as well as the masses of the bearings and the elastic constants of their anchorages. These elastic constants are usually different in the horizontal and vertical directions. On the other hand, the analysis can assume that the shaft is everywhere truly circular, and may neglect forces along the shaft, and gyroscopic effects. The analysis depends on
Card 1/7

89807

S/110/61/000/002/001/009

E035/E517

The Calculation of Critical Speeds

finding two modes of oscillation of the stationary shaft in two independent directions (corresponding to the horizontal and vertical elastic constants of the bearings); then the critical speeds of the shaft will be equal to the frequencies of these two modes. The partial differential equation for a shaft in oscillation is:

$$\mu(x) \frac{\partial^2 y(x,t)}{\partial t^2} + \frac{\partial^2}{\partial x^2} \left[EI(x) \frac{\partial^2 y(x,t)}{\partial x^2} \right] = 0, \quad (2)$$

where x is the distance along the shaft, $\mu(x)$ is the mass/unit length of the shaft at point x , $EI(x)$ is the stiffness at point x , $y(x,t)$ is the deflection of the shaft at point x and time t . The general solution of Eq.(2) is of the form:

$$y(x,t) = y(x) \cos \Omega t \quad (3)$$

where Ω is a critical frequency of speed. With this general solution we can derive an ordinary differential equation:

$$\frac{d^2}{dx^2} \left[EI(x) \frac{d^2 y(x)}{dx^2} \right] - \mu \Omega^2 y(x) = 0. \quad (4)$$

Card 2/7

89807

S/110/61/000/002/001/009

The Calculation of Critical Speeds... E035/E517

and, with the aid of the differential relations

$$\frac{dM}{dx} = V; \quad \frac{dy}{dx} = \theta, \quad (5)$$

where M is the bending moment; V is the shear force, θ is the slope of the shaft, we can express Eq.(4) as two separate second-order differential equations:

$$\frac{d^2 y}{dx^2} = \frac{d\theta}{dx} = \frac{M}{EI} \quad (6)$$

and

$$\frac{d^2 M}{dx^2} = \frac{dV}{dx} = \mu \Omega^2 y. \quad (7)$$

The boundary conditions for the solution of these two equations can be expressed by considering the bearings at the end of the shaft; there are initially two unknowns at each end. From many possible methods of solution, the following was chosen: Eqs. (6) and (7) are

Card 3/7

89807

5/110/61/000/002/001/009

The Calculation of Critical Speeds... E035/E517

approximated by finite difference expressions. A value of frequency ω which is within the range being investigated, but is not, in general, equal to a critical frequency, is selected, and the equations are solved twice. For the first solution, one of the unknown boundary conditions at the left hand end of the shaft is given an arbitrary value of 1 and the other is made equal to 0. For the second solution, these boundary conditions are reversed. A linear combination of these two solutions is examined to see whether it satisfies the boundary conditions at the right hand end of the shaft. This will not, in general, be the case; for the boundary conditions will only be satisfied if $\omega = \Omega$. In general, therefore, a function $\Phi(\omega)$, which has the properties that

$$\Phi(\Omega) = 0, \text{ and } \Phi(\Omega + \delta\Omega) \cdot \Phi(\Omega - \delta\Omega) < 0$$

is calculated. Starting at the low end of the frequencies to be investigated, the equations are solved and Φ calculated for steadily increasing values of ω . The presence of a critical speed in the neighbourhood of the current value of ω is detected by a change in the sign of $\Phi(\omega)$. The exact value of the critical frequency can

Card 4/7

89807

S/110/61/000/002/001/009

The Calculation of Critical Speeds.... E035/E517

then be located by searching between the last two values of ω with successively smaller increments or decrements in ω . A root is found by one of two criteria: a) that $|\Delta\omega| < \epsilon$, or b) that $|\Phi(\omega)| < \epsilon_1$. In the actual example solved, the shaft is represented by a finite approximation consisting of a number of masses connected by a flexible but mass-less shaft. Using recurrence relations for variables such as the shear force and bending moment at the position of the i -th mass in terms of these variables at the $(i-1)$ th mass, and the constants associated with the $(i-1)$ th mass, the finite difference equations can be solved: for example, the recurrence relation for the shear force at the i -th mass is:

$$V_i = V_{i-1} + m_{i-1} y_{i-1} \omega^2 \quad (11)$$

where m_i is the mass of the i -th mass, and y_i is the deflection of the shaft at the i -th mass. The recurrence relationships take a slightly different form at the positions of the bearings. Whenever a value of Ω is determined by this system, a calculation of the actual deflected form of the shaft is made. The critical speeds of a large turbo-generator shaft about 29 m long, comprising

Card 5/7

89807

S/110/61/000/002/001/009

The Calculation of Critical Speeds.... E035/E517

a 3-stage turbine and an alternator rotor, and supported on seven bearings, were computed on a "STRELA" (СТРЕЛА) computer. The shaft was considered to consist of 122 masses, and the finite difference equations were solved in a corresponding number of steps. The flow chart for the calculation is shown in Fig.3. In the range of speeds investigated, 0 to 3800 r.p.m., the shaft was found to have 5 critical speeds for vertical oscillation, and 6 for horizontal oscillation. One of the vertical critical speeds (2850 r.p.m.) was quite close to the running speed of the shaft (3000 r.p.m.). Two of the critical speeds, including this one, were mainly due to oscillation of the rotor, and not the turbines. A separate calculation involving only the rotor showed that its own critical speeds were little affected by the presence of the turbine. The entire calculation took only 10 to 15 minutes. There are 4 figures, 2 tables and 7 references: 5 Soviet and 2 non-Soviet.

SUBMITTED: May 12, 1960

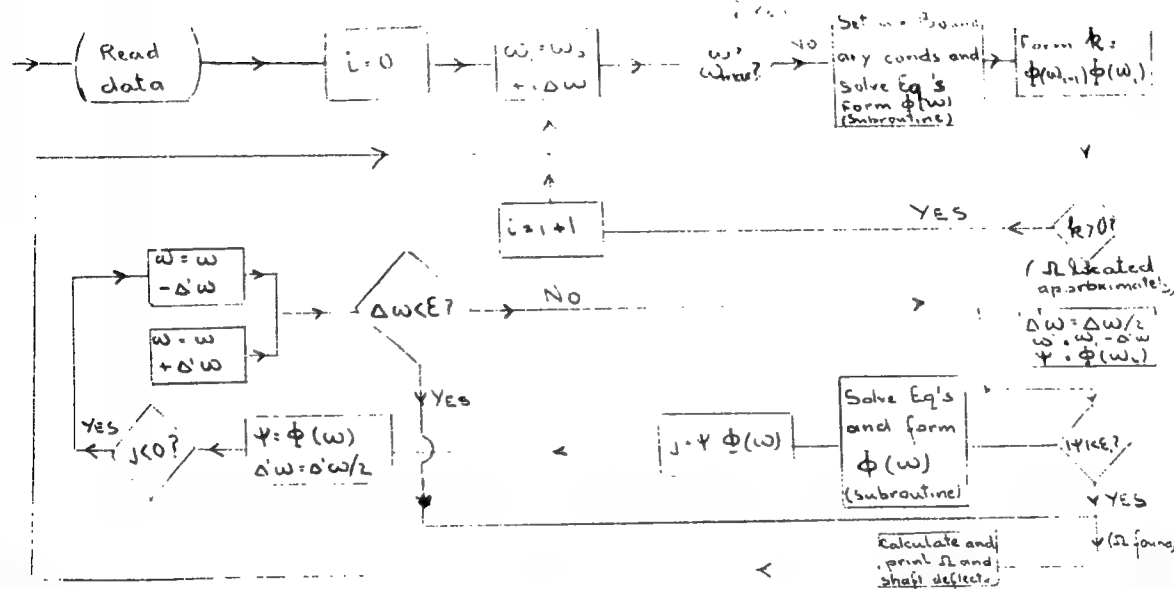
Card 6/7

89807

S/110/61/000/002/001/009

The Calculation of Critical Speeds

E035/E517



Card 7/7

MEL'NIKOVA, G. G.

15(0)
AUTHORS:
Karklit, A. K., Potekhin, P. S.

307/51-59-1-2/2

TITLE:
Conference of Young Specialists (Konferentsiya molodykh
spetsialistov)

PERIODICAL:
Ogneupor, 1959, Nr 1, pp 47-47 (USSR)

ABSTRACT:
This conference of young specialists of the Vsesoyuznyy
Institut ogneporov (All Union Institute of Refractories)
was held in Leningrad on November 13-14, 1958, with
the participation of representatives of the youth scientific
and the Ukrainian Institut ogneporov (Ukrainian Institute
of Refractories). The conference about 150 participants
show of young engineers and technicians. The first day
head of the Institute, outlined in his opening speech the work
of young specialists of various scientific branches, designating
it as successful. Further, the following reports are mentioned:
V. G. Jeger spoke about manufacturing methods of refractory
panels made of ferro siliceous rocks, borosilicates
"Krasnoye";
B. V. Rodina spoke about test results of the properties
of magnesium cements in liquid glass.
A. P. Vlasovskiy (CMIO) reported on the dynamic method of
determination of the modulus of elasticity at temperatures
up to 1800°C.
G. G. Melnikova spoke about the examination of the changes
in the composition of worn-out refractory magnesia-alumina
products.
V. I. Iakina reported on elaboration results of spectroscopic
methods for the alumina content in types of clay.
V. G. Shushchik stated the causes of bar fracture of the press
CM-145 by means of telemechanization.
G. A. Kaba used a telemechanic transmitter for the automatic
control of mold charging on the press CM-145.
V. M. Lebedev reported on the work of the design for
a new furnace cart.
V. Z. Shren reported on the design of water saving and automatic
A. M. Levin reported on the design of water saving and automatic
tion.
M. Z. Perlovson dealt with questions of air dust collection.
M. M. Pervitskiy, A. A. Zvereva and others submitted a
new variant for the foundation of a tunnel size.
A. Z. Pervitskiy reported on the beginning of operation and
installation of a rotary furnace at the Berovskiy Azbest
As a principal result it was stated that part of the young
specialists still insufficiently familiar with the
production. The measures provided for by the party and
government to reform the universities and to strengthen their
relations to work in operation also improve the training of
specialists.

Card 1/3

ASSOCIATIONS:
Vsesoyuznyy Institut ogneporov (All-Union Institute of
Refractories)

Card 2/3

40282

3/13/62/000/000/00/00
B101/B144

15.2230

AUTHORS: Melnikova, G. A., Goncharov, V. V. (Deceased)

TITLE: Phase composition of a worn-out high-alumina refractory material taken out of a furnace vault

PERIODICAL: Ogneupory, no. 1, 1962, 405-412

TEXT: Analyses of two samples of high-alumina refractories are reported. This material was in use for 1 1/2 year in the furnace roof of a tunnel kiln in which chromite products were burned containing a sulfite spent liquor binder. Sample S came from a brick of the Semilukskiy ogneporovyy zavod (Semiluki Refractory Plant) and was made up of (a) a worn-out layer of corundum 5 to 15 mm thick and glass phase containing 9.20% SiO_2 , 10.52% Al_2O_3 , 3.17% Cr_2O_3 , 85.64% insoluble in HF and 7% alkali in the soluble part; refractoriness $>1880^\circ\text{C}$ and (b) a layer of corundum and glass phase 10 to 17 mm thick and little changed, with a refractoriness of 1865°C containing 11.20% SiO_2 , 85.21% Al_2O_3 , 0.38% Cr_2O_3 , 79.60% insoluble

Card 1/3

Phase composition of a worn-out ...

3/131/6.1/1.1, 1971
3101/3144

in HF and 6% alkali in the soluble part. Sample No. 6 is from the ...
the Chasov-Yarskiy kombinat ognepornyykh izdeliy (Chasov-Yar Refractory Products). The worn-out layer 1 to 2 mm thick covered ...
2 mm thick crust, was a mixture of corundum, nepheline and ...

containing 31.40% SiO_2 , 61.16% Al_2O_3 , 0.55% Fe_2O_3 , 46.67% insoluble

and 12% alkali in the soluble part; refractoriness 1440°C. Layer 20 mm thick was a mixture of corundum, nepheline ...

containing 17.10% SiO_2 , 67.77% Al_2O_3 , 0.63% Fe_2O_3 ; refractoriness ...

The layer made up of corundum and glass phase, 0.2 mm thick and ...
changed, showed a content of 22.16% SiO_2 , 68.28% Al_2O_3 , 0.56% Fe_2O_3 .

1.10% insoluble in HF and 10% alkali in the soluble part; refractoriness ...

1700°C. No mullite was found in any sample, although the ...

in refractories had contained ... mixture of mullite ...

the dry substance of the sulfite spirit liquor shows an ...
of 1.0% the decomposition of the mullite may be due to ...

solid solutions ... formed between corundum, β - Al_2O_3 and ...

Card 2/3

Phase composition of a burn-out ...

5/13/66
B101/1144

chromic oxide. Conclusion: Corundum-mullite refractory material, ...
refractory material from the Shasov-far clay, containing 100% ...
60-85% Al_2O_3 are not suitable for furnaces in which refractory material ...
having the characteristics investigated is burned. There are ...
and ...

ASSOCIATION: Vsesoyuznyy institut ogneporov (All-Union Institute ...
Refractory Materials)

Card 3/3

RYABENKOV, G.N.; TSYPLAKOV, S.M.; MEL'NIKOVA, G.K.

Screening for screens. Gor.zhur. no.8:72 Ag '62.

(MIRA 15:8)

(Screens (Mining))

L 37651-65 EPT(c)/EPA(s)-2/EWA(h)/EWP(j)/EWT(l)/EWT(m)/T Pc-4/Pr-4/Pt-10/Pz-6/
Feb IJP(c) AT/RM

ACCESSION NR: AP5009321

S/0191/65/000/004/0046/0049

AUTHOR: Gul', V. Ye.; Shenfil', L. Z.; Mel'nikova, G. K.

TITLE: Formation of current-conducting structures in a polymeric material in a magnetic field

SOURCE: Plasticheskiye massy, no. 4, 1965, 46-49

TOPIC TAGS: organic semiconductor, semiconducting polymer, current conducting plastic, nickel, epoxy resin

ABSTRACT: A semiconducting plastic has been prepared by using a magnetic field to align nickel powder filler to form current-conducting structures in epoxy resins. The magnetic field technique was used to impart electrical conductivity to the plastic without resorting to high loads of filler which would impair mechanical properties. Finely divided or coarse-grained nickel powder or a mixture of both was dispersed in ED-5 epoxy resin plasticized with liquid thiccol, with or without polyethylenepolyamine or triethanolamine hardener. The dispersion was placed between the poles of an electromagnet and subjected to fields of 0-1200 oersted. It was found that when the magnetic field was applied during curing, it had a great effect on the resistivity of the end product. All conditions being equal, resistivity dropped by two orders of magnitude when the magnetic field was applied.

Card 1/2

L 37651-65

ACCESSION NR: AP5009321

For example, resistivities as low as 5×10^{-3} ohm-cm were obtained for a resin loaded with 7.5 vol% finely divided and 22.5% coarse-grained nickel. The formation and breakup of the structure in uncured resin were relaxation processes. The optimum field intensity increased with temperature. To minimize the resistivity, a pulsating magnetic field was required. The magnetic field was most effective when coarse-grained nickel powder having an elongated particle shape was used and at low curing temperatures. Orig. art. has: 5 figures and 1 table. [SM]

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MT, SS

NO REF SOV: 003

OTHER: 006

ATD PRESS: 3221

Card 2/2 MB

11.01.1958, 10.00

MIKHLIN, B.D.; MEL'NIKOVA, G.K.; ZAYTSEVA, V.D.; NIKITINA, S.A.; GRITSMAN,
Yu.Ya.; GORBOVITSKIY, Ye.B.; KRYUCHKOVA, G.S.; KONDRAT'YEVA, N.I.

Effect of rubber on drugs and the body. Report No.1: Present-day
views on the subject. Med.prom. 12 no.2:35-41 F '58. (MIRA 11:3)

1. Nauchno-issledovatel'skiy institut reziny i Nauchno-issledovatel'-
skiy institut eksperimental'noy khirurgicheskoy apparatury i
oborudovaniya.

(RUBBER--PHYSIOLOGICAL EFFECT) (DRUG INDUSTRY)

MISHLIN, R.D., MEL'NIKOVA, G.K., ZAYTSEVA, V.D., NIKITINA, S.A., GRITSMAN,
Yu.Ya., GORBOVITSKIY, Ye.B., KRYUCHKOVA, G.S., KONDRAT'YEVA, N.I.

Effect of vulcanized rubber on drugs and the body. Report No.2.
Med.prom. 12 no.8:8-12 Ag '58 (MIRA 11:9)

1. Nauchno-issledovatel'skiy institut reziny i Nauchno-issledovatel'skiy
institut eksperimental'noy khirurgicheskoy apparatury i instrumentov.
(RUBBER--PHYSIOLOGICAL EFFECT)

MARTYNOVA, V.A., starshiy nauchnyy sotrudnik, kand.farm.nauk;
LYUKSHENKOV, A.G., kand.farm.nauk; MEL'NIKOVA, G.K., starshiy
nauchnyy sotrudnik, kand.tekhn.nauk

Study of the influence of different rubber varieties on liquid
drug preparations. Part 2. Sbor.nauch.trud. TSANII 2:69-75 '61.
(MIRA 16:5)

1. Laboratoriya tekhnologii lekarstvennykh form i galenovykh
preparatov Tsentral'nogo aptechnogo nauchno-issledovatel'skogo
instituta i Nauchno-issledovatel'skiy institut resheniy i
lateksnykh izdeliy.

(RUBBER-TESTING)

(DRUGS-PRESERVATION)

MARTYNOVA, V.A., starshiy nauchnyy sotrudnik, kand.farm.nauk; LYUKSHENKOV, A.G., kand.farm.nauk; MEL'NIKOVA, G.K., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Study of the effect of rubber corks made from specimens I-51, I-54 and 25P on the quality and preservation time of acid and neutral injection solutions. Sbor.nauch.trud. TSANII 2:76-84 '61.

(MIRA 16:5)

1. Laboratoriya tekhnologii lekarstvennykh form i galenovykh preparatov Tsentral'nogo aptechnogo nauchno-issledovatel'skogo instituta i Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy.

(RUBBER--TESTING)

(DRUGS--PRESERVATION)